

OREM CITY

STORM WATER MASTER PLAN

City Council
General Session
Feb 23, 2016



MASTER PLANNING PROCESS REVIEW

- February 2014—Master Plan review begins
- January 2015—Endorsement by PW Advisory Commission
- Spring/Summer 2015—Regular updates to City Council
- Public Outreach
 - Social media
 - Utilities website
 - Several mailings and newsletters
 - August 2015—Two open houses
- December 8, 2015—Work session
- January 26, 2016—General Session
 - Adoption of Storm Water Master Plan
 - Acceptance of Storm Water User Rate Study



STORM WATER TEN-YEAR CIP PLAN

(BASED ON 5-YEAR FUNDING PROPOSAL)

		Project Identifier	Project Name	Estimated FY 2015 Total Cost	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
High Priority Projects	5-Year Plan (FY2017-2021)	Rank	PN16A	400 N (A)	DONE									
		1	PN16B	250 E	\$ 573,200	\$ 151,000	\$ 457,108							
		2	PS31	900 S	\$ 629,100	\$ 667,412								
		3	PS32	Heat Plant Rd (A)	\$ 307,400		\$ 335,904							
		4	PS33	Heat Plant Rd (B)	\$ 51,500		\$ 56,275							
		5	PN10C	1200 N (A)	\$ 1,376,600		\$ 1,022,889	\$ 495,800						
		6	DBN2	Bonneville School DB	\$ 419,600			\$ 472,263						
		7	PN10A	Bonneville School	\$ 111,700			\$ 125,719						
		8	PN10B	800 W	\$ 256,400			\$ 288,580						
		9	PN8F	1200 N (E)	\$ 231,000			\$ 194,994	\$ 66,948					
		10	PN8E	1200 N (D)	\$ 133,600				\$ 154,879					
		11	PN8B	1200 N (C)	\$ 408,900				\$ 474,027					
		12	PN8A	1200 N (B)	\$ 208,900				\$ 242,172					
	10-year plan (thru 2025)	13	DBS5	Lakeridge Jr. High DB	\$ 894,300				\$ 756,819	\$ 288,317				
		14	PS63	Lakeridge Jr. High	\$ 673,200					\$ 803,836				
		15	PS26A	2000 S (B)*	\$ 1,016,300					\$ 388,810				
		16	DBN3	Taylor Drain Outlet**	\$ 473,800					\$ -				
		17	PN8D	800 S (C)	\$ 135,300					\$ 291,244	\$ 949,940			
		18	PN8C	Windsor Park DB	\$ 159,600						\$ 582,714			
		19	PN40A	1200 N (E)	\$ 66,900						\$ 166,402			
		20	PN40B	1200 N (D)	\$ 550,400						\$ 157,030	\$ 40,435		
		21	PN40C	1200 N (C)	\$ 1,071,500							\$ 84,747		
		22	PN40D	Geneva Rd (E)	\$ 168,500							\$ 697,230		
		23	PN34	2000 S (C)	\$ 673,200							\$ 1,126,596	\$ 237,671	
		24	PN33	Nielson Grove Park	\$ 444,700								\$ 219,854	
		25	PN32	Geneva Rd (D)	\$ 656,200								\$ 878,373	
		26	PN12A	Geneva Rd (C)	\$ 174,300								\$ 580,233	
		27	PN12B	Geneva Rd (B)	\$ 108,300								\$ 102,743	\$ 776,053
		28	PN11	600 N (A)	\$ 179,300									\$ 234,245
		29	DBN5	600 N (B)	\$ 935,000									\$ 145,546
		30	PN14A	1200 N (G)	\$ 278,400									\$ 240,964
		31	PN14B	Sharon Park DB	\$ 441,700									\$ 691,109
		M1	Misc. maintenance	\$ 970,874	\$ 100,000	\$ 103,000	\$ 106,090	\$ 109,273	\$ 112,551	\$ 115,927	\$ 119,405	\$ 122,987	\$ 126,677	\$ 130,477
		Repairs	Emergency repairs	\$ 970,874	\$ 100,000	\$ 103,000	\$ 106,090	\$ 109,273	\$ 112,551	\$ 115,927	\$ 119,405	\$ 122,987	\$ 126,677	\$ 130,477
		Fleet	Fleet Costs	\$ 3,189,342	\$ 537,268	\$ 538,554	\$ 414,311	\$ 334,063	\$ 296,522	\$ 305,276	\$ 314,293	\$ 302,873	\$ 311,894	\$ 321,186
			TOTAL	\$ 18,939,890	\$ 888,268	\$ 1,869,074	\$ 2,041,559	\$ 2,129,965	\$ 2,216,469	\$ 2,309,337	\$ 2,409,189	\$ 2,497,855	\$ 2,584,122	\$ 2,670,057

*Portion not paid by developer

**Will be paid by developer

PROPOSED PROJECTS AND COSTS

- Major Conveyance Facilities (Pipelines)
 - 144 projects (New, Parallel, Reroute, Upsize)
 - \$54.6 million*
- Open Channel Improvements (Irrigation Ditches)
 - 1 project, Modify
 - \$41,000*
- Detention Basin Improvements
 - 24 projects (New, Modify)
 - \$6.5 million*
- Culvert Improvements
 - 3 projects
 - \$216,000*
- TOTAL: \$61 Million*



**Present Value*

STORM WATER UTILITY FUNDING

- Direction from city council:
 - “Pay as you go”
 - No new debt!

Pay as you go



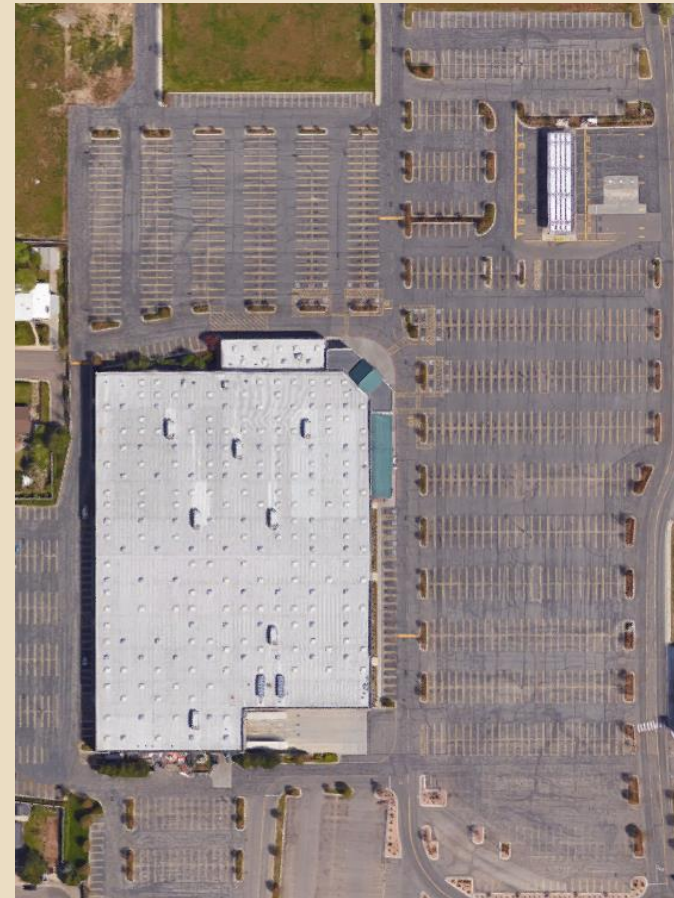
HOW IS THE STORM WATER UTILITY FUNDED?

- Storm Water Fee
 - Based on amount of impervious surface.
 - Equivalent Service Unit (ESU)
 - Equal to the average impervious surface of a residential property.
 - 1 ESU = 2,700 sq. ft.
 - \$5.25 per ESU (Current rate)
- All single-family units are charged 1 ESU per month.
- Businesses are charged according to their impervious surface area
 - Example: A business with 27,000 sq. ft. of impervious surface (e.g., roof, parking lot, walk ways) would be charged for 10 ESUs, or \$52.50/month.
 - Opportunity to receive credits by implementing qualifying BMPs.

STORM WATER UTILITY FUNDING

AN EXAMPLE

- Costco
 - 264 ESUs
 - Roof, parking lot, sidewalks
 - 700,000 sq. ft. impervious area
 - \$1,386/month
- Credit Program
 - Best management practices
 - 23 ESUs
 - \$120.75
- Total each month
 - \$1,265.25



STORM WATER UTILITY FUNDING

AN EXAMPLE

■ Average Resident

- 1 ESU
 - Roof, driveway, walkways
- 2,700 sq. ft. impervious area
- \$5.25 month



STORM WATER UTILITY FUNDING

AN EXAMPLE

■ Costco

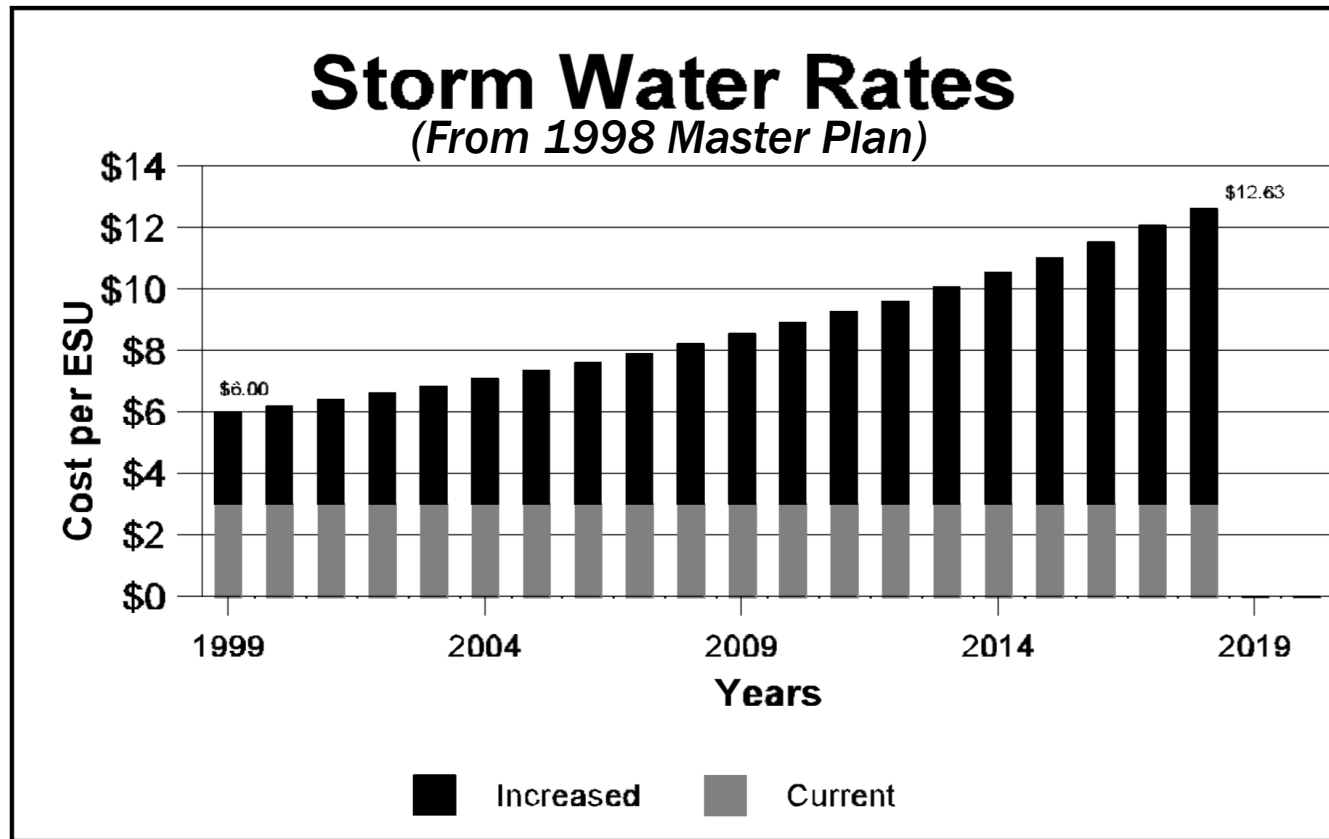
- 264 ESU
- 713,000 sq. ft. impervious area
- \$1,265.25/month

■ Average Resident

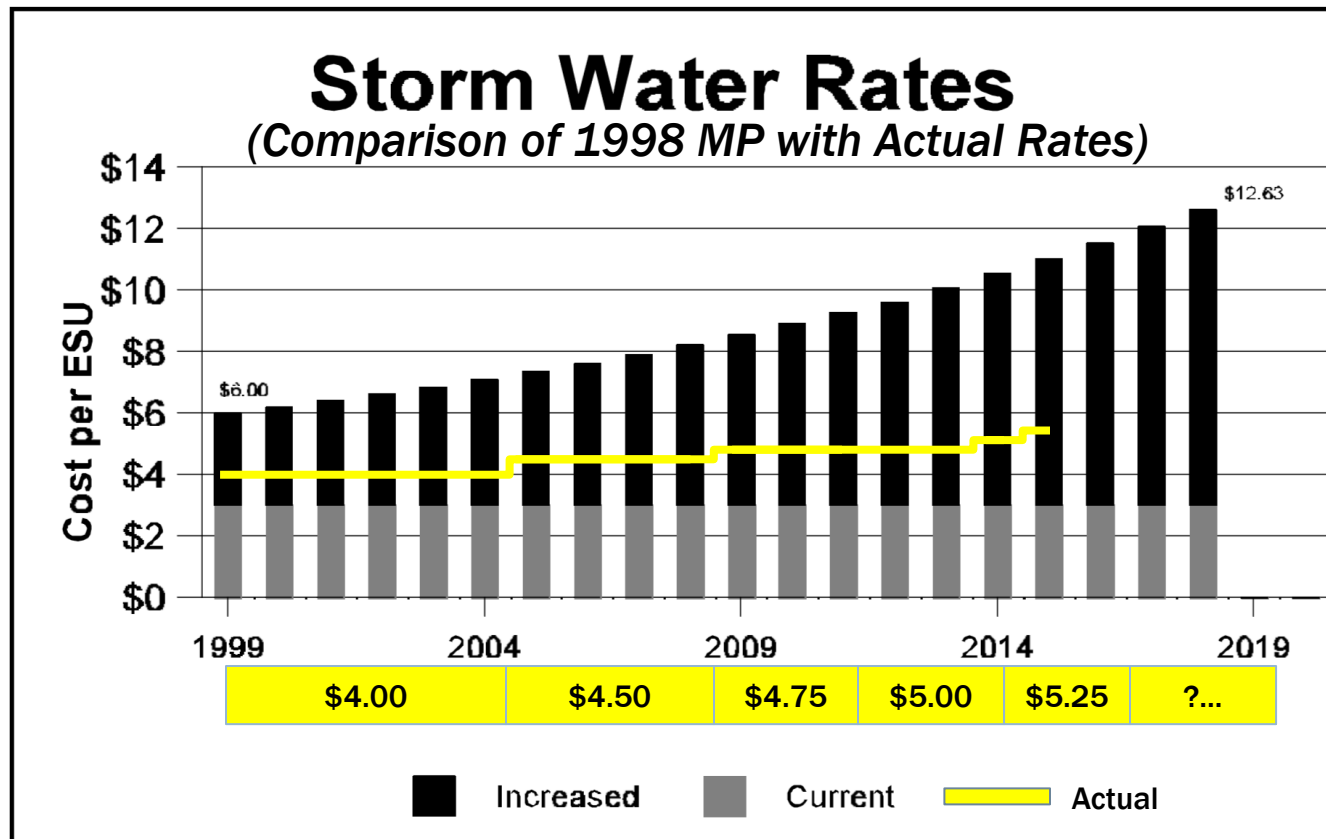
- 1 ESU
- 2,700 sq. ft. impervious area
- \$5.25 month



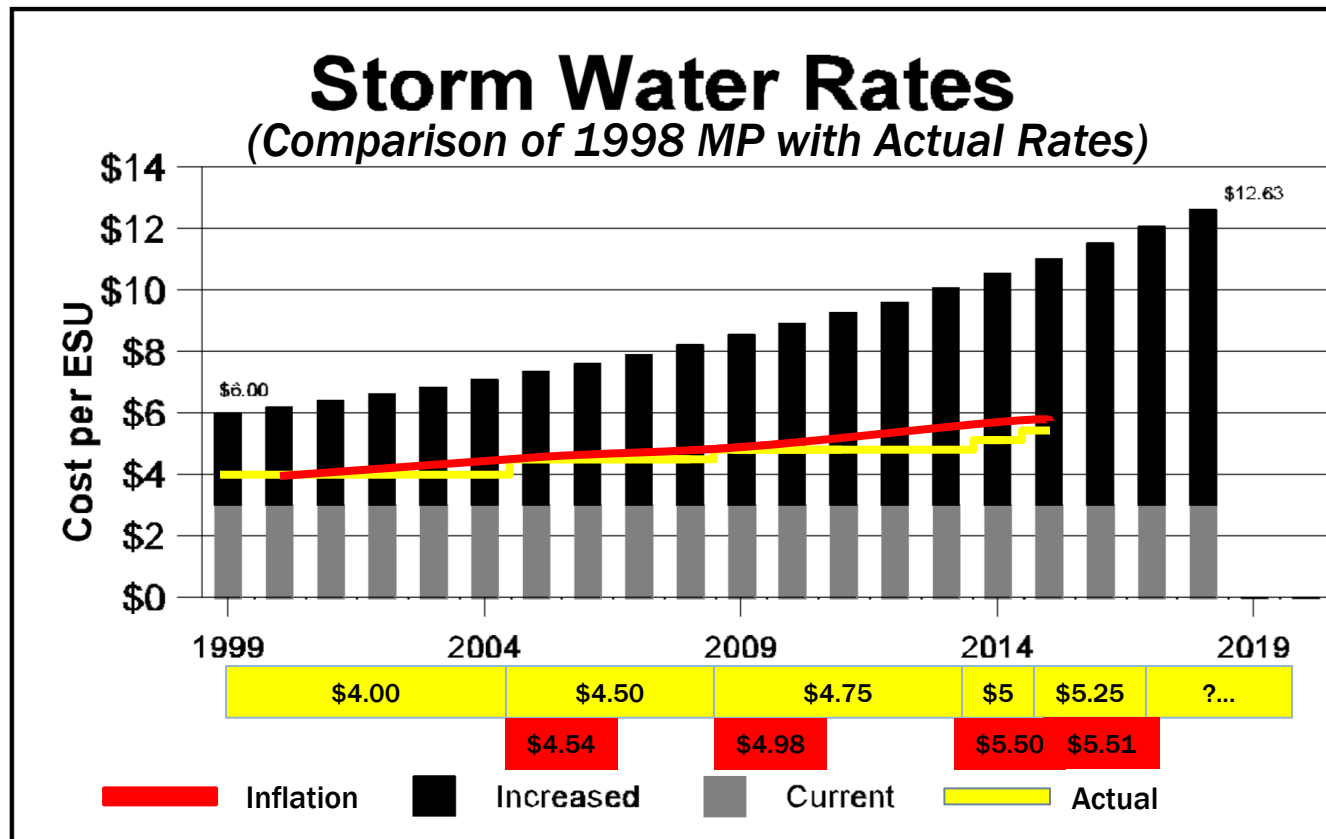
STORM WATER RATES



STORM WATER RATES

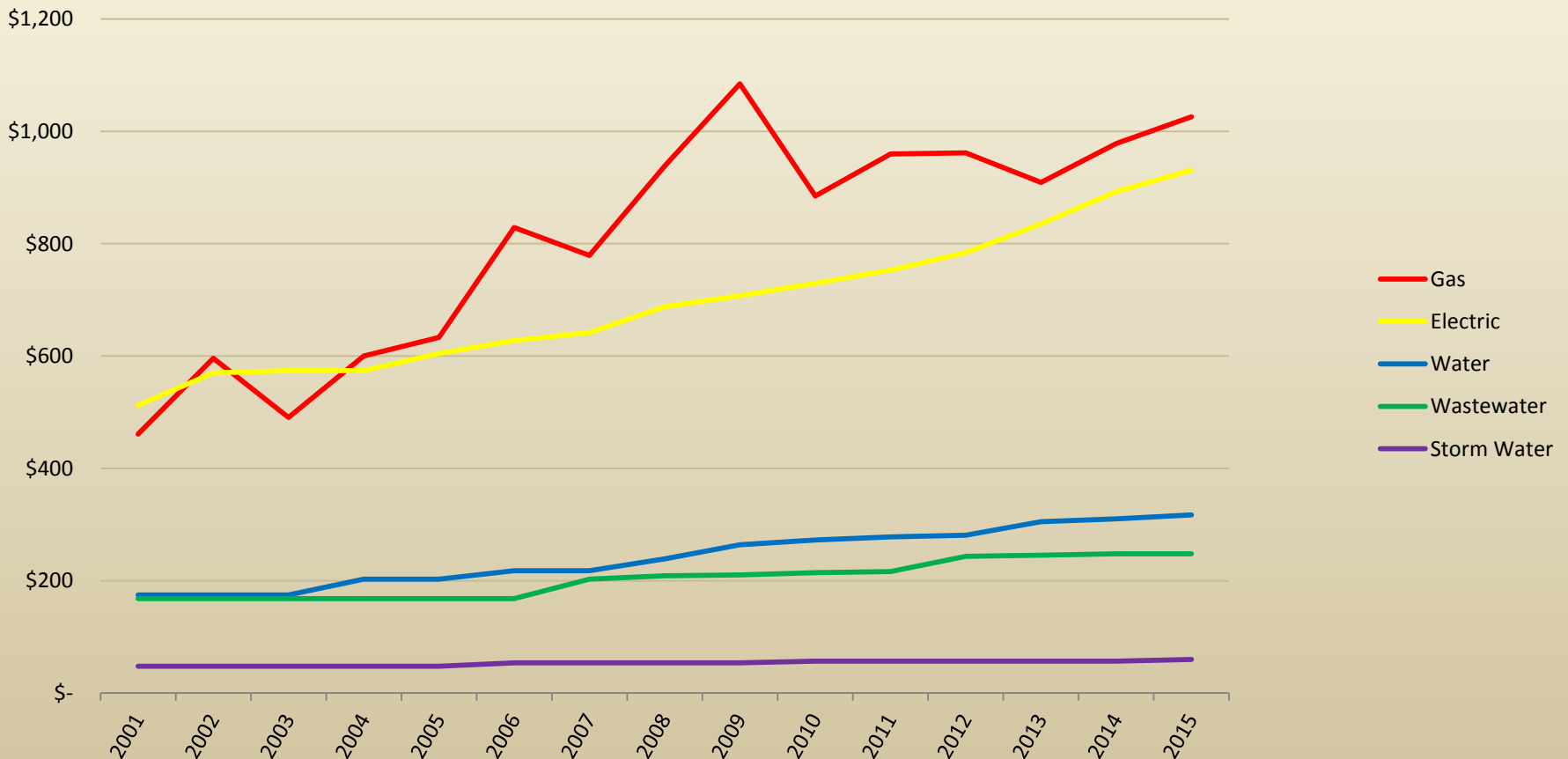


STORM WATER RATES



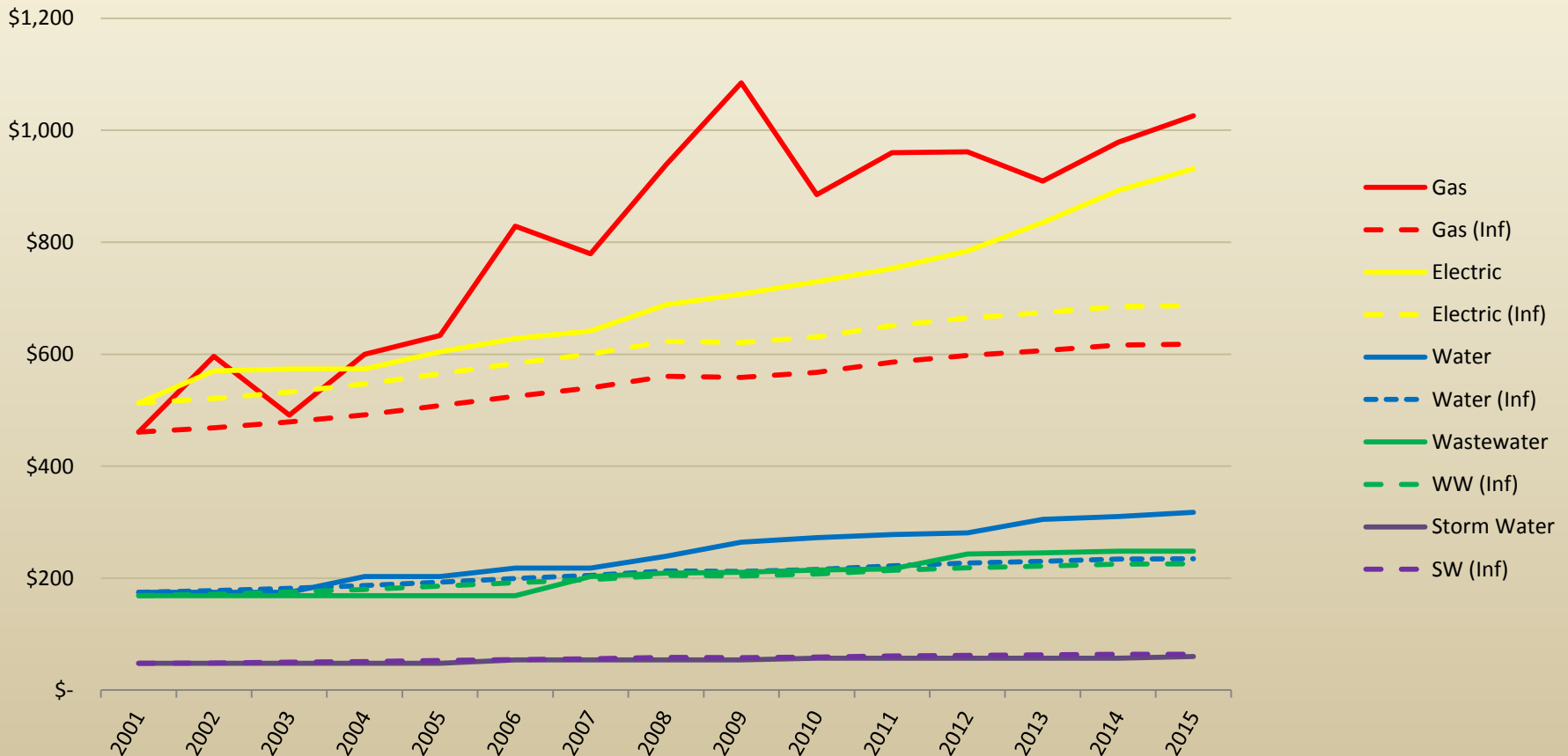
COMPARISON OF UTILITIES

Average Annual Cost of Household Utilities



COMPARISON OF UTILITIES

Average Annual Cost of Household Utilities
(with inflation)



STORM WATER RATE OPTIONS

Scenario 1: 5-Year				
Year	Cost per ESU	Monthly Increase per ESU	Cumulative Increase	Total CIP
Current	\$5.25	\$0.00	\$0.00	\$750,000
Year 1	\$6.25	\$1.00	\$1.00	\$1,550,000
Year 2	\$6.75	\$0.50	\$1.50	\$1,800,000
Year 3	\$7.10	\$0.35	\$1.85	\$2,000,000
Year 4	\$7.35	\$0.25	\$2.10	\$2,150,000
Year 5	\$7.60	\$0.25	\$2.35	\$2,307,660
Year 6	\$7.80	\$0.20	\$2.55	\$2,405,017
Year 7	\$8.00	\$0.20	\$2.75	\$2,487,312
Year 8	\$8.20	\$0.20	\$2.95	\$2,572,421
Year 9	\$8.40	\$0.20	\$3.15	\$2,660,441
Year 10	\$8.60	\$0.20	\$3.35	\$2,751,470
Effect on CIP	\$0			

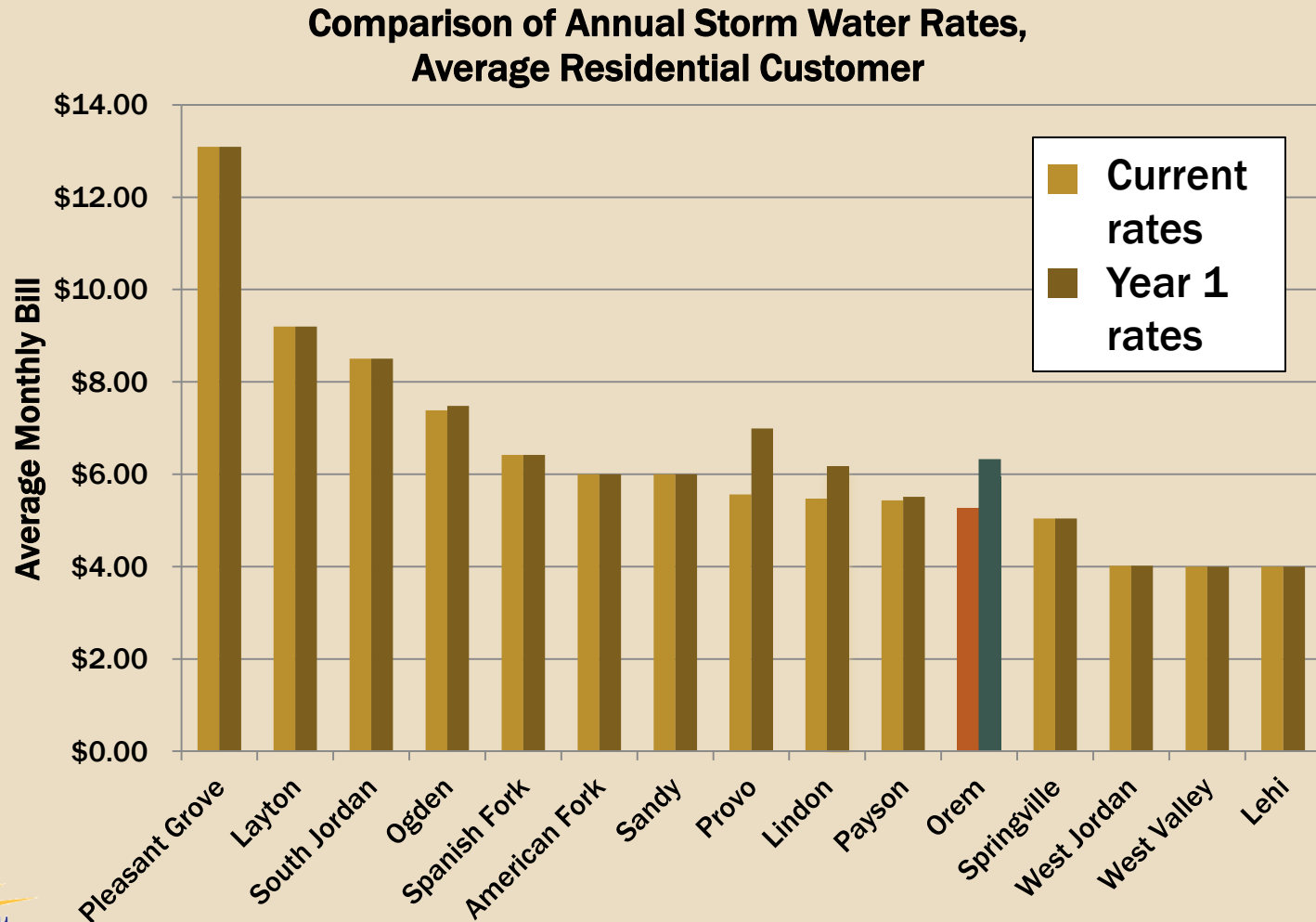
STORM WATER RATE OPTIONS

Scenario 2: 7-Year				
Year	Cost per ESU	Monthly Increase per ESU	Cumulative Increase	Total CIP
Current	\$5.25	\$0.00	\$0.00	\$750,000
Year 1	\$5.95	\$0.70	\$0.70	\$1,453,561
Year 2	\$6.40	\$0.45	\$1.15	\$1,663,228
Year 3	\$6.85	\$0.45	\$1.60	\$1,856,487
Year 4	\$7.15	\$0.30	\$1.90	\$2,020,574
Year 5	\$7.45	\$0.30	\$2.20	\$2,177,369
Year 6	\$7.75	\$0.30	\$2.50	\$2,337,810
Year 7	\$8.00	\$0.25	\$2.75	\$2,487,312
Year 8	\$8.20	\$0.20	\$2.95	\$2,572,421
Year 9	\$8.40	\$0.20	\$3.15	\$2,660,441
Year 10	\$8.60	\$0.20	\$3.35	\$2,751,470
Effect on CIP	-\$725,000			

STORM WATER RATE OPTIONS

Scenario 3: 10-Year				
Year	Cost per ESU	Monthly Increase per ESU	Cumulative Increase	Total CIP
2016	\$5.25	\$0.00	\$0.00	\$750,000
2017	\$5.85	\$0.60	\$0.60	\$1,403,625
2018	\$6.25	\$0.40	\$1.00	\$1,580,771
2019	\$6.60	\$0.35	\$1.35	\$1,751,754
2020	\$6.90	\$0.30	\$1.65	\$1,907,334
2021	\$7.20	\$0.30	\$1.95	\$2,058,293
2022	\$7.50	\$0.30	\$2.25	\$2,209,252
2023	\$7.80	\$0.30	\$2.55	\$2,348,657
2024	\$8.10	\$0.30	\$2.85	\$2,480,361
2025	\$8.40	\$0.30	\$3.15	\$2,618,226
2026	\$8.60	\$0.20	\$3.35	\$2,751,470
Effect on CIP	-\$1,600,000			

OTHER CITIES STORM WATER RATES



QUESTIONS?

